

## A FREQUENCY DOUBLER CIRCUIT WITH TRIMMABLE CURRENT CONTROL

## ABSTRACT OF THE DISCLOSURE

A frequency doubler circuit with trimmable current control. In one  
5 embodiment, the present invention provides a circuit comprising an oscillator  
with a current source and a frequency doubler circuit coupled to the current  
source. In one embodiment, the current source is for generating a reference  
current. In one embodiment, the frequency doubler circuit is operable to  
10 receive a first frequency signal for generating a second frequency signal and  
also receiving the reference current. The frequency doubler circuit, using the  
reference current, operates to compensate for process variation of capacitance  
of the frequency doubler circuit and uses the reference current to maintain a  
known duty cycle. In one embodiment, the circuit further comprises a control  
15 loop for generating an output current, wherein the output current, operating in  
conjunction with the reference current, operates to compensate for process  
variation of capacitance of the frequency doubler circuit and uses the reference  
current to maintain a known duty cycle. In one embodiment, the current source  
comprises a trimmable current control.